

Category: Entertainment

California's entertainment equipment emissions inventory is an estimate of the amount and types of pollutants emitted from off-road equipment used in support of the entertainment industry. The source of data was from California's Portable Equipment Registration Program (PERP) and currently represents diesel engines only.

This category includes two equipment types :

<u>Equipment Type</u>	<u>Fuel Type</u>	<u>2000 Population</u>
Generators	D	541
Compressors	D	1

The annual activity in hours/year are:

<u>Equipment Type</u>	<u>Fuel Type</u>	<u>(hr/yr) Activity</u>
Generators	D	338
Compressors	D	815

Emissions Inventory:

As with other OFFROAD equipment types, the emissions inventory for the entertainment equipment is calculated as the product of the emission rate (in grams per horsepower-hour), engine population, and activity (hours per year) in annual average use hours.

[Calculating Emissions Inventory \(PDF Format\)](#)

For the current emissions inventory (tons/day):

[Air Resources Board Almanac](#)

Input Data Sources:

The input factors used by the OFFROAD Model are obtained from various data sources listed below:

Input Factor	Source of Data (Diesel)
Population (base year 2000)	CA Portable Engine Registration Program (PERP) (2004)
Useful Life	Power Systems Research (1996)
Activity (hr/yr)	Power Systems Research (1996)
Average horsepower	Power Systems Research (1996); PERP (2004)
Load factor	Power Systems Research (1996)
Allocation factor	Energy & Environmental Analysis (EEA) document (1995)
Growth factor	DRI/McGraw-Hill employment data (1994)
Survival rate	Power Systems Research (1996)

For more additional background information on the input factors used by the OFFROAD Model: [\(Document Link\)](#)

For tables of input data for the Entertainment category: [\(Document Link\)](#)

Adopted Regulations for Entertainment Category:

2005: *(Reflected in OFFROAD Model)* Board approved a regulation to establish a Statewide Portable Equipment Registration Program. [\(Document Link\)](#)

2004: *(Reflected in OFFROAD Model)* Board approved amendment to California's existing off-road diesel regulations to harmonize with USEPA Tier 4 regulation (40 CFR 1039). [\(Document Link\)](#)

2000: *(Reflected in OFFROAD Model)* Board approved the emissions inventory for off-road large CI engines (≥ 25 hp) from the OFFROAD Model. [\(Document Link\)](#)

Future Improvements to the Entertainment Category:

The emissions inventory from the OFFROAD Model strives to accurately represent the 'real-world' as accurately as possible. Therefore, the methodologies and data sources are constantly re-evaluated and updated where applicable. The following items are future improvements for the entertainment category:

- Update population and activity values as new data becomes available
- Development of growth factors based on economic indicators
- Allocate equipment from the county down to the neighborhood level (GIS)